



Distributed Renewable Energy Funding Sources

Presented to:

MA Environmentally Preferable Products Vendor Fair and Conference

November 2, 2005

Massachusetts Technology Collaborative
Massachusetts Renewable Energy Trust

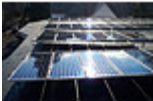
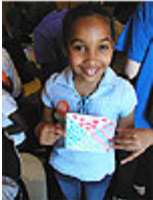
Jim Christo

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RENEWABLE ENERGY TRUST



PRESENTATION OVERVIEW

- What is the Renewable Energy Trust?
- Funding sources for Renewable Energy Projects:
 - Small Renewables Initiative
 - Large Onsite Renewables Initiative



MTC AND THE TRUST

- The Renewable Energy Trust was established in 1998 to
 - increase the supply & demand for electricity from clean sources, and
 - promote the development of a vibrant Massachusetts renewable energy industry.
- Massachusetts Technology Collaborative (MTC) selected to administer the Trust.
- **Supported over 400 projects and activities with ~\$120 million in awards.**

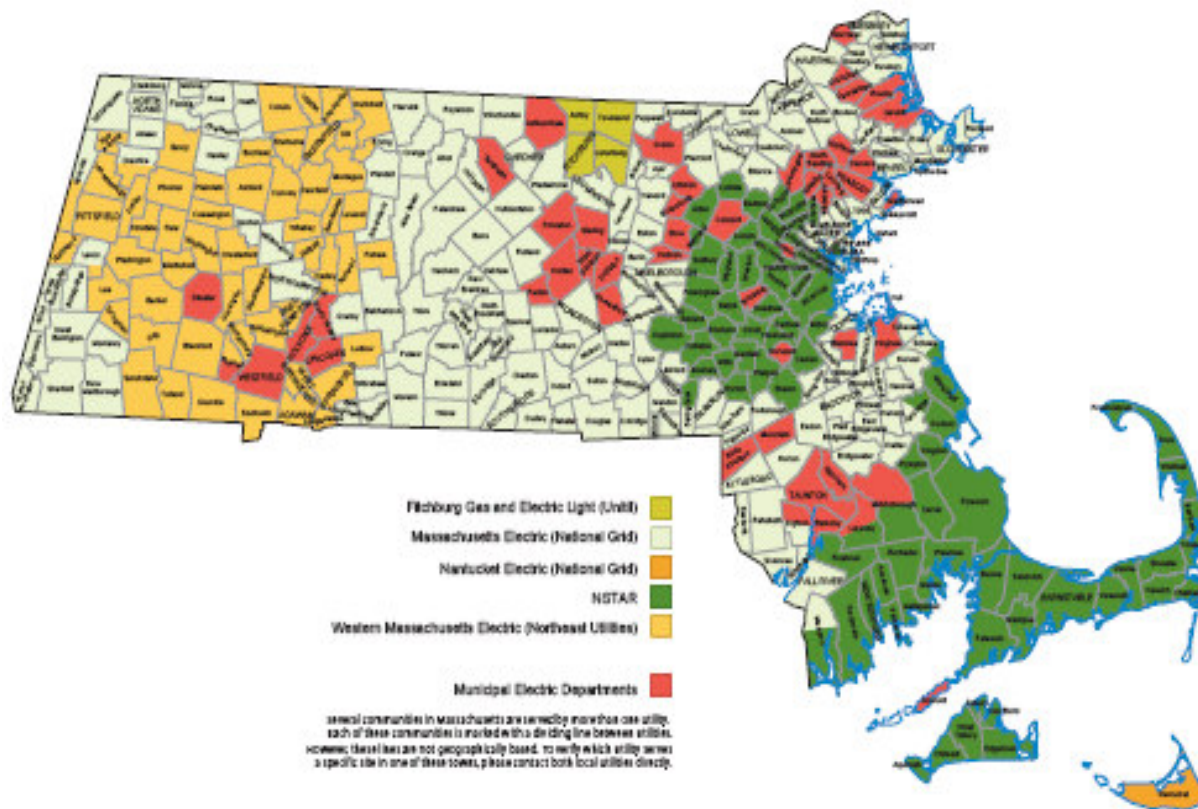


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AREAS ELIGIBLE FOR FUNDING

- Source of funds is a surcharge → \$25 million/yr
- Only customers in investor owned utility service territories:





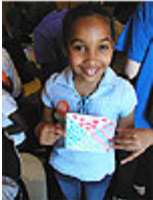
ELIGIBLE RENEWABLE TECHNOLOGIES

- Initiatives support commercially available technologies:

Small Renewables Initiative	Large Onsite Renewables Initiative	
Solar PV Wind Hydro	Solar PV Wind Hydro	Biomass Fuel Cells

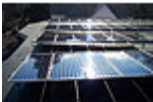


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SMALL RENEWABLES INITIATIVE (= <10 kW)

- \$5 million (in \$1 million blocks)
- Grants of up to \$50,000 for design & construction
- Customer sited renewable energy projects.
- Monthly awards made on a first-come first-serve application process.
- Actual award is based on the rebate matrix.



SMALL RENEWABLES INITIATIVE (= <10 kW)

Installation Matrix for Block 2 of Small Renewables Initiative				
	<u>Technology</u>			
	PV	Wind	Hydro	
	(\$/watt dc)	(\$/watt ac)	(\$/watt ac)	
Distributed Generation				
Base Incentive (\$/watt)	\$ 2.75	\$ 2.75	\$ 4.00	
<i>PLUS: Additions to Base</i>				
MA-manufactured components	\$ 0.50	\$ 1.00	\$ 0.75	
Public Buildings	\$ 1.50	\$ 1.00	\$ 2.00	
Economic Target Area	\$ 1.00	\$ 1.00	\$ 1.00	
20-50% Affordable Housing (40-B)	\$ 1.00	\$ 1.00	\$ 1.00	
50%+ Affordable Housing (40-B)	\$ 2.50	\$ 2.50	\$ 2.50	
Back-up for Critical Loads	\$ 0.50	\$ 0.10	N/A	
Building-Integrated PV	\$ 1.00	N/A	N/A	
New High Performance Buildings				
LEED or CHPS certified, or	\$ 1.50	\$ 1.00	\$ 2.00	
Energy Star or equivalent	\$ 0.50	\$ 0.35	\$ 0.75	



SMALL RENEWABLES INITIATIVE (= <10 kW)

Example of Block 2: Rebate Matrix

Total PV Cost Per Watt	\$8.50
Project Size (Watts DC)	8,000
Initial Cost	\$68,000
MTC Rebate	
Base Incentive (\$2.75 per watt)	\$ 22,000
MA Manufactured Components (\$.50 per watt)	\$ 4,000
Economic Target Area (\$1.00 per watt)	\$ 8,000
Public Building (\$1.50 per watt)	\$ 12,000
Total (\$5.75 per watt)	\$ 46,000
Cost After MTC Rebate	\$ 22,000

Two-Thirds of Cost covered by MTC Rebate

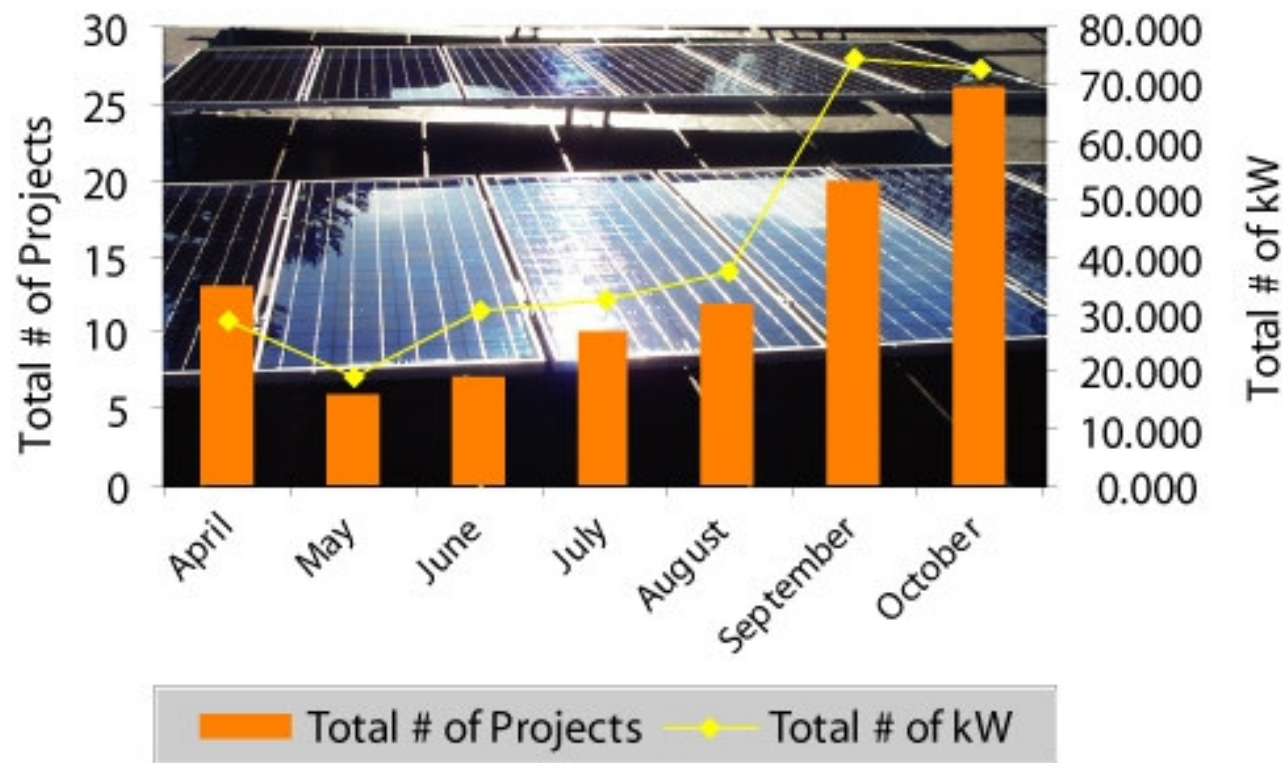


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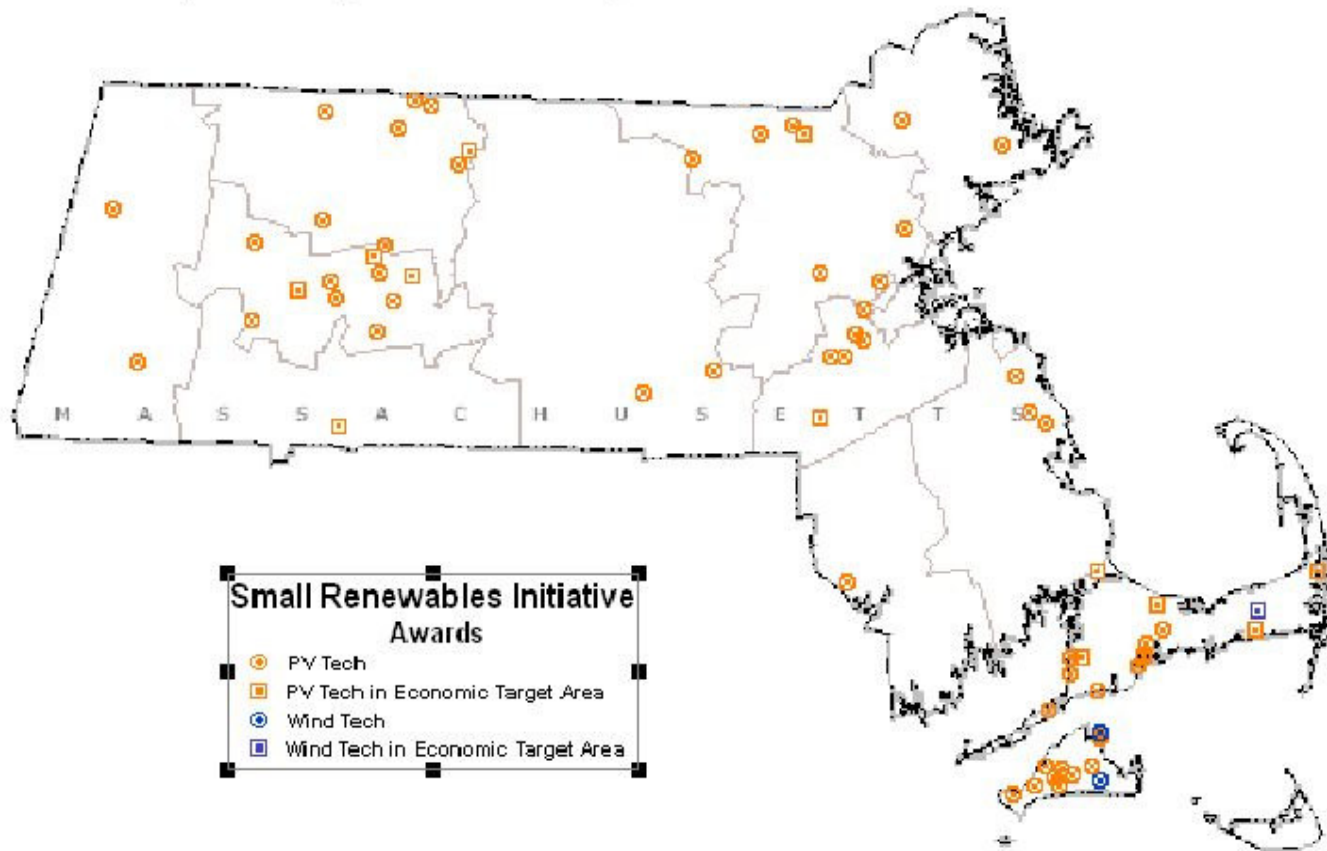
SMALL RENEWABLES INITIATIVE (= ≤ 10 kW)

- **Inquiries and applications at an all time high.**
- **Block 1 fully allocated to ~ 300 kW over 94 projects.**



SMALL RENEWABLES INITIATIVE

Awards in Massachusetts Through September 14, 2005
by Technology and Economic Target Area





SMALL RENEWABLES INITIATIVE (= ≤ 10 kW)



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LARGE ONSITE RENEWABLES INITIATIVE (LORI)

- Competitive solicitation and evaluation process
- Launch 1st round – October 31, 2005
- \$3.5 million available for this round.
- Public projects will be eligible in addition to commercial, industrial, and institutional projects.

Project Type	Available Funding
Feasibility	Capped at \$40,000 requiring cost-share of at least 20% or \$5000
Design and Construction	D&C Award based on incentive matrix (forthcoming). Design is capped at \$75,000 or 75% of actual costs; Construction is capped at \$500,000 or 75% of actual costs;



LARGE ONSITE RENEWABLES INITIATIVE (LORI)

- IBEW Local 103 Turbine (100 kW)
- Tower manufactured by Morrison Berkshire in MA:





LARGE ONSITE RENEWABLES INITIATIVE (LORI)

- The Massachusetts Innovation Center in Fitchburg
- Green building elements include solar (147 kW), reuse of building materials, storm-water management system, and a ground-coupled heat pump.
- Formerly a mill building, is now the site of the North Central Charter School, as well as commercial and residential space.





LARGE ONSITE RENEWABLES INITIATIVE (LORI)

- Other Recent Projects – LORI-type:

Site Owner	Award	Project Type
Iggy's Bread of the World (Commercial Bakery)	Design and Construction	45 kW Biodiesel Cogen
Jiminy Peak (Ski Resort)	Design and Construction	Large Onsite Wind
Riverdale Mills (Wire Mesh Mfg.)	Design and Construction	Onsite Hydro
Varian Semiconductor Equipment	Feasibility	Large Onsite Wind



SCHEDULE: GOOD TIMING

- Large Onsite Renewables Initiative Schedule:

New LORI Solicitation Released	October 31, 2005
Bidders Conference	November 15, 2005
Applications Due	January 12, 2006
Awards	April 2006

- Small Renewables Initiative:

- Rolling
- New rebate matrix released October 31, 2005



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NEW FEDERAL TAX INCENTIVE HIGHLIGHTS

- Solar Business Federal Tax Credit increased from 10% to 30% (plus accelerated depreciation)
- Solar Residential Federal Tax Credit set at 30% (\$2,000 cap)
- Fuel Cell Business Federal Tax Credit set at 30% (or \$1,000 per kW)



FOR MORE INFORMATION...

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